

IN THE CLAIMS:

Please amend the claims as follows:

1-37. (Canceled)

38. (Presently Amended) A method of determining the presence of soybean sudden death syndrome resistance in the soybean plant in a greenhouse setting, the method comprising the steps of:

- (a) inoculating soil with a ~~low-density~~ inoculum of *Fusarium solani*, wherein said inoculum of *Fusarium solani* has an inoculum density of about 5×10^3 spore/cm³ soil or less;
- (b) planting a soybean plant in said inoculated soil;
- (c) growing said plant in said soil in a greenhouse;
- (d) isolating *Fusarium solani*-infected tissue from said plant;
- (e) culturing said infected tissue for a period of time sufficient to allow for fungal colony forming unit growth;
- (f) scoring at least one of disease severity and infection severity in said plant using the number of said fungal colony forming units; and
- (g) correlating at least one of said disease severity and said infection severity to at least one of disease severity and infection severity data from genetic markers associated with soybean sudden death syndrome resistance to identify a correlation, wherein a statistically significant correlation indicates presence of soybean sudden death syndrome resistance in said soybean plant.

39. (Currently Amended) A method of determining the presence of soybean sudden death syndrome resistance in the soybean plant in a greenhouse setting, the method comprising the steps of:

- (a) inoculating soil with a low density inoculum of *Fusarium solani*, wherein said low density inoculum of *Fusarium solani* comprises an inoculum density of about 3×10^3 spore/cm³ soil or less;
- (b) planting a soybean plant in said inoculated soil;
- (c) growing said plant in said soil in a greenhouse;
- (d) isolating *Fusarium solani*-infected tissue from said plant;
- (e) culturing said infected tissue for a period of time sufficient to allow for fungal colony forming unit growth;
- (f) scoring at least one of disease severity and infection severity in said plant using the number of said fungal colony forming units; and
- (g) correlating at least one of said disease severity and said infection severity to at least one of disease severity and infection severity data from genetic markers associated with soybean sudden death syndrome resistance to identify a correlation, wherein a statistically significant correlation indicates presence of soybean sudden death syndrome resistance in said soybean plant.

40. (Original) The method of claim 38, wherein said *Fusarium solani*-infected plant tissue comprises root tissue.

41. (Currently Amended) A method of characterizing resistance to soybean sudden death syndrome in a soybean plant, the method comprising the steps of:

- (a) isolating root pieces ~~roots~~ from a soybean plant infected by *Fusarium solani*;
- (b) culturing the root pieces on a culture plate including a restrictive growth medium that provides for slow fungal growth and restricted bacterial growth;
- (c) determining root infection severity by statistically evaluating the number of *Fusarium solani* colony forming units on said culture plate, wherein the

statistically evaluating comprises counting the number of CFU, and expressing the number of CFU as a percentage of a total number of root pieces; and

- (d) characterizing resistance to soybean sudden death syndrome in said soybean plant based on said determined root infection severity.

42. (Currently amended) The method of claim 41, wherein said characterization of resistance to soybean sudden death syndrome further comprises determining a level of resistance to soybean sudden death in the soybean plant based on a disease severity value, an infection severity value or both a disease selection value and an infection severity value.

43. (Previously Presented) The method of claim 41, wherein the restrictive growth medium comprises one or more fungicidal antibiotics and one or more bacteriocidal or bacteriostatic antibiotics.

44. (Previously Presented) The method of claim 43, wherein the one or more fungicidal antibiotics are selected from the group consisting of 2,6-dichloro-4-nitroaniline and pentachloronitrobenzene and the one or more bacteriocidal or bacteriostatic antibiotics are selected from the group consisting of tetracycline, neomycin, streptomycin, and rifampicin.

Please add the following new claim:

45. (New) The method of claim 43, wherein at least one of the one or more bacteriocidal or bacteriostatic antibiotics is rifampicin.